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SUBJECT	Soviet Aircraft Engines		NO. OF PAGES 3
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1.	of M 11 D and M 11 K engines	evel maximum and cr	ruising powers with rpm
	M 11 D Engines Take-off maximum hp: 125 Take-off maximum rpm: 1600 Sea level maximum hp: not k Cruising hp: 80 Cruising rpm: 1200 Ratio of propeller to cranks	Take-o: Take-o: nown Sea le Cruisir Cruisir	Engines ff maximum hp: 180 ff maximum rpm: 1800 vel maximum hp: not known ng hp: 120 ng rpm: 1200
2.	nacio di properrer do cranks	war or Til	<u>. </u>
-3.	lubricating o	ils are used with t	these engines
	In spring and fall: MK type In winter: MZS type In summer: MS type		
4.	type, diame	ter and number of b	plades of the propellers
	M 11 D Engines Type: Soviet manufactured Propelier blades: wood Number of blades: two Diameter: two meters; fixed	Type: Propell Number pitch Diamete	Engines VISH; Soviet manufactured Ler blades: wood of blades: two F: 1.80 m; automatic constant speed pitch control
	· ·		i i
5.		-	
	M 11 D engines: UT-2 and PO- M 11 K engines: YAK-18 and I	-2 aircraft MANYA (Fieseler sto	rch) aircraft
6.	M 11 K engines: YAK-18 and I	KANYA (Fieseler sto	orch) aircraft so the crankshaft on the
6.	M 11 K engines: YAK-18 and I ratio of supercha	KANYA (Fieseler sto	4
6	M 11 K engines: YAK-18 and I ratio of supercharacter ASH-21 Aero engine REVIEW CLASSIFICATION	CRET SECRET/SECURIT	to the crankshaft on the
6.	M 11 K engines: YAK-18 and I ratio of supercharacter ASH-21 Aero engine	KANYA (Fieseler sto erger drive speed t	to the crankshaft on the

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25X1 The ratio is 62:6 type, diameter and number of blades of the propeller 7. Type: VISH Diameter: 3.20 m Propeller blades: Number of blades: three Pitch control: automatic, constant speed; cil pressure, R-7 type; oil pressure increased to 23 kg/cm2 from 6 kg/cm2 in order to change pitch. 8. types of lubricating oils are used 25X1 In spring and fall: MK type In winter: MZS type In summer: MS type 9 10 11 the following information on the VK-105 Aero engine. Take-off: 1300 Normal climb (in both supercharge gears): 1300 (in lat gear at 3000 m altitude); 1000 (in 2nd gear at 4500 m altitude) Maximum cruising power: 1000 Combat power: 1300 Ratio: 2 (crankshaft) to 1 (propeller) Take-off: 2600 (crankshaft) Normal climb: 2600 (1st gear); 2300 (2nd gear) Maximum cruising power: 2000 (crankshaft) Combat power: 2600 (crankshaft)

Height for given power: 3000 m altitude - 1300 hp 4500 m altitude - 1000 hp

Boost Pressure
Take-off: 1100 Hg mm
Normal climb: 1000 Hg mm (in both supercharge gears)
Maximum cruising power: 900 Hg mm
Combat power: 1100 Hg mm

Fuel consumption
Take-off: 230 gr per hp per hour
Normal climb: not known
Maximum cruising power: 210 gr per hp per hour
Combat power: probably 230 gr per hp per hour

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Sanitized Copy Approved for Release 2010/03/03 : CIA-RDP82-00047R000100100009-9 SECRET SECURITY INFORMATION - 3 -12. types of propellers are fitted to these engines VK-105 Aero Engine Propeller type: VISH-Blades: three; metal **VISH-10**5 Pitch control: automatic, constant speed; oil pressure, R-7 type (VK-105 engines are equipped with six carburetors, one for two cylinders) 25X1 13. the VK-107 was used in the YAK-9 and the PE-2. 14. air compressor, generator and other auxiliary units The compressor to crankshaft rpm ratio was 62:6 in 1st gear, 85:8 in 2nd gear. The compressor was equipped with a Polikhovsky automatic air intake control valve. The generator was 550 watts, 24 volts. The magnetoes were BSM type. This engine had six carburetors, one for every two cylinders. I can give the following information on the performance of the VK-107 engine. 1650 at 5500 m altitude with compressor in 1st gear at 3100 rpm (crankshaft) 1200 at 10000 m altitude, with compressor in 2nd gear at 2800 rpm

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1500 at 7000 m altitude, with compressor in 2nd gear at 3000 rpm

(crankshaft)

(crankshaft)

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